

Required Procedures for Respiratory Protection Program

WAC 296-842-220

Rule

Table 17 Controlled Negative Pressure (CNP) Test Procedure
<p>Important:</p> <ul style="list-style-type: none">• This is a quantitative fit-test (QNFT) procedure.• This method determines respirator fit by measuring how much the facepiece leaks when it is subject to a slight negative pressure after various premeasurement activities.• Measurements occur while employees remain still and hold their breath for 10 seconds.• No test aerosols are used. Respirator cartridges aren't needed for this test.
Test Preparations
<ol style="list-style-type: none">1. Make sure the individual conducting the fit test is thoroughly trained to perform this test.2. Obtain a CNP test instrument such as a FitTester 3000™. Make sure:<ul style="list-style-type: none">• Defaults are set at:<ul style="list-style-type: none">- 15mm (-0.58 inches) of water test pressureand- A modeled inspiratory flow rate of 53.8 liters per minute• It has an effective audio warning device that signals when employees fail to hold their breath<p>Note:</p><ul style="list-style-type: none">➤ You aren't required to obtain test recording and printing equipment such as computers or printers. Hand recording results is acceptable.➤ To see default settings, check the instrument's "REDON protocol" to see default settings.3. Obtain facepiece adapters appropriate for each test respirator. <p>Note:</p> <ul style="list-style-type: none">➤ Adapters are either a one-piece (for SCBA facepieces), or 2-piece (for dual cartridge facepieces) device providing a manifold and breathing valve system. For positive pressure respirators, you will need to obtain an additional fitting, available from the respirator manufacturer, to convert the facepiece to negative pressure.➤ To obtain adapters, contact the CNP instrument's distributor, Occupational Health Dynamics, or the respirator manufacturer.

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Table 17 (Continued)
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Test

Important:

After the test, you must ask the employee about the comfort of the respirator **and** if the respirator has become unacceptable, another size or model must be chosen and tested.

4. Explain the test procedure to the employee.
5. Train the employee on how to hold a breath for at least 20 seconds.
6. Prepare the respirator for the fit test as follows:
 - Remove or prop open the inhalation valves. If a breathing tube is present, disconnect it.
 - Replace cartridges, if present, with the manifold and breathing valve adapter
 - For positive pressure facepieces, mount the manufacturer's additional fitting followed by the manifold-breathing valve attachment.
 - Connect the respirator to the CNP device according to the CNP instrument manufacturer's directions.
7. Have the employee put on, adjust, and seal check the respirator.
8. Turn on the instrument **and** have the employee stand and perform the fit test exercises in Table 19.
9. Interpret the test results:
 - The test is **passed** if the overall fit factor obtained is at least 100 for a half facepiece, or at least 500 for a full facepiece.
 - The test has **failed** if the fit factor is less than 100 for a half facepiece; 500 for a full facepiece.
 - If the test has failed you must have the employee select another respirator model or size following the steps in Table 11 **and** repeat this procedure, starting at Step 6.

